## **AMENDMENTS TO THE CLAIMS**

Please amend claims 3, 4, 5, 6, 11, 12, and 13 as follows:

- 1. (Canceled)
- 2. (Canceled)
- 3. (Previously Presented) An anti-inflammatory compound comprising the following structure:

$$X_a - X_1 - X_2 - X_3 - X_4 - X_5 - X_6$$

wherein

X<sub>a</sub> is a membrane translocation domain comprising from 6 to 15 amino acid residues;

X<sub>1</sub> is L, A, I or nor-leucine (Nle);

X<sub>2</sub> is D, E, N, Q, homoserine (Hser) or 2-ketopropylalanine (2-ketopropy-A);

X<sub>3</sub> is W, F Y, 4-biphenyl-alanine (Bpa), homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), or cycloxexyl-alanine (Cha);

X<sub>4</sub> is S, A, E, L, T, nor-leucine (Nle), or homoserine (Hser);

X<sub>5</sub> is W, H, homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), O-benzyl serine (SeroBn), or 3-Pyridylalanine (3-Pal); and

X<sub>6</sub> is L, A, I, or nor-leucine (Nle),

wherein the anti-inflammatory compound is less than 100 amino acids in length.

4. (Currently Amended) The anti-inflammatory compound of claim 3, wherein Xa is the amino acid sequence TA An anti-inflammatory compound comprising the following structure:

$$\underline{X_{\underline{a}}\text{-}X_{\underline{1}}\text{-}X_{\underline{2}}\text{-}X_{\underline{3}}\text{-}X_{\underline{4}}\text{-}X_{\underline{5}}\text{-}X_{\underline{6}}}$$

## wherein

 $X_a$  is Thr-Ala;

X<sub>1</sub> is L, A, I or nor-leucine (Nle);

X<sub>2</sub> is D, E, N, Q, homoserine (Hser) or 2-ketopropylalanine (2-ketopropy-A);

X<sub>3</sub> is W, F Y, 4-biphenyl-alanine (Bpa), homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), or cycloxexyl-alanine (Cha);

X<sub>4</sub> is S, A, E, L, T, nor-leucine (Nle), or homoserine (Hser);

X<sub>5</sub> is W, H, homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), O-benzyl serine (SeroBn), or 3-Pyridylalanine (3-Pal); and X<sub>6</sub> is L, A, I, or nor-leucine (Nle),

wherein the anti-inflammatory compound is less than 100 amino acids in length.

- 5. (Currently Amended) The anti-inflammatory compound of claim 3, further comprising the variable  $X_7$  immediately C-terminal to  $X_6$ , wherein  $X_7$  is the amino acid sequence QTE.
- 6. (Currently Amended) The anti-inflammatory compound of claim 3, wherein said compound comprises a sequence selected from the group consisting of Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu TALDWSWLQTE (SEQ ID NO:28), Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu LDWSWLQTE (SEQ ID NO:29), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu TALDWSWL (SEQ ID NO:30), Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu ALDWSWLQTE (SEQ ID NO:31), Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu LDWSWLQTE (SEQ ID NO:32), Leu-Asp-Trp-Ser-Trp-Leu LDWSWL (SEQ ID NO:33), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr TALDWSWLQT (SEQ ID NO:34), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln TALDWSWLQ (SEQ ID NO:35), Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr ALDWSWLQT (SEQ ID NO:36), Leu-Asp-Trp-Ser-Trp-Leu-Gln LDWSWLQ (SEQ ID NO:37), Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr LDWSWLOT (SEQ ID NO:38), Ala-Asp-Trp-Ser-Trp-Leu ADWSWL (SEO ID NO:39), Leu-Asp-Trp-Ser-Trp-Ala LDWSWA (SEQ ID NO:40), Ala-Asp-Trp-Ser-Trp-Ala ADWSWA (SEQ ID NO:41), Leu-Asp-Phe-Ser-Trp-Leu LDFSWL (SEQ ID NO:42), Leu-Asp-Tyr-Ser-Trp-Leu LDYSWL (SEQ ID NO:43), Leu-Asp-Trp-Ala-Trp-Leu LDWAWL (SEQ ID NO:44), Leu-Asp-Trp-Glu-Trp-Leu LDWEWL (SEQ ID NO:45), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu TAADWSWLQTE-(SEQ ID NO:46), Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu ADWSWLQTE-(SEQ ID NO:47), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu TAADWSWL (SEQ ID NO:48), Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu AADWSWLQTE (SEQ ID NO:49), Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu ADWSWLQTE (SEQ ID NO:50), Ala-Asp-Trp-Ser-Trp-Leu ADWSWL (SEQ ID NO:51), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr TAADWSWLQT (SEQ ID NO:52), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln TAADWSWLQ (SEQ ID NO:53), Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr AADWSWLQT (SEO ID NO:54), Ala-Asp-Trp-Ser-Trp-Leu-Gln ADWSWLQ (SEQ ID NO:55), Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr ADWSWLQT-(SEQ ID NO:56), Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu ALDWSWAQTE (SEQ ID NO:57), Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu LDWSWAQTE (SEQ ID NO:58), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Ala TALDWSWA (SEQ ID NO:59), Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu ALDWSWAQTE (SEQ ID NO:60), Leu-

Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu LDWSWAQTE (SEQ ID NO:61), Leu-Asp-Trp-Ser-Trp-Ala LDWSWA (SEQ ID NO:62), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr TALDWSWAQT (SEQ ID NO:63), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln TALDWSWAQ (SEO ID NO:64), Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr ALDWSWAOT (SEO ID NO:65), Leu-Asp-Trp-Ser-Trp-Ala-Gln LDWSWAQ-(SEQ ID NO:66), Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr LDWSWAQT (SEQ ID NO:67), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu TAADWSWAQTE-(SEQ ID NO:68), Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu ADWSWAQTE (SEQ ID NO:69), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala TAADWSWA (SEQ ID NO:70), Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu AADWSWAQTE (SEQ ID NO:71), Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu ADWSWAQTE (SEQ ID NO:72), Ala-Asp-Trp-Ser-Trp-Ala ADWSWA (SEQ ID NO:73), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr TAADWSWAQT-(SEQ ID NO:74), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln TAADWSWAQ (SEQ ID NO:75), Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr AADWSWAQT (SEQ ID NO:76), Ala-Asp-Trp-Ser-Trp-Ala-Gln ADWSWAQ (SEQ ID NO:77), Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr ADWSWAQT (SEQ ID NO:78), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu TALDFSWLQTE (SEQ ID NO:79), Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu LDFSWLQTE (SEQ ID NO:80), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu TALDFSWL (SEQ ID NO:81), Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu ALDFSWLQTE-(SEQ ID NO:82), Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu LDFSWLQTE (SEQ ID NO:83), Leu-Asp-Phe-Ser-Trp-Leu LDFSWL (SEQ ID NO:84), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr TALDFSWLQT (SEQ ID NO:85), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln TALDFSWLQ (SEQ ID NO:86), Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr ALDFSWLQT (SEQ ID NO:87), Leu-Asp-Phe-Ser-Trp-Leu-Gln LDFSWLQ (SEQ ID NO:88), Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr LDFSWLQT (SEQ ID NO:89), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu TALDYSWLQTE (SEQ ID NO:90), Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu LDYSWLQTE (SEQ ID NO:91), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu TALDYSWL (SEQ ID NO:92), Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu ALDYSWLQTE (SEQ ID NO:93), Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu LDYSWLQTE (SEQ ID NO:94), Leu-Asp-Tyr-Ser-Trp-Leu LDYSWL (SEQ ID NO:95), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr TALDYSWLQT-(SEQ ID NO:96), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln TALDYSWLQ (SEQ ID NO:97), Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr ALDYSWLQT (SEO ID NO:98), Leu-Asp-Tyr-Ser-Trp-Leu-Gln LDYSWLO (SEO ID NO:99), Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr LDYSWLQT (SEQ ID NO:100), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu TALDWAWLQTE (SEQ ID NO:101), Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu LDWAWLQTE (SEQ ID NO:102), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu TALDWAWL (SEQ ID NO:103), Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu ALDWAWLQTE (SEQ ID NO:104), Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu LDWAWLQTE (SEQ ID NO:105), LeuAsp-Trp-Ala-Trp-Leu LDWAWL (SEQ ID NO:106), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr TALDWAWLQT (SEQ ID NO:107), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln TALDWAWLQ (SEQ ID NO:108), Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr ALDWAWLQT (SEQ ID NO:109), Leu-Asp-Trp-Ala-Trp-Leu-Gln LDWAWLQ (SEQ ID NO:110), Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr LDWAWLQT (SEQ ID NO:111), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu TALDWEWLQTE (SEQ ID NO:112), Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu LDWEWLQTE (SEQ ID NO:113), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu TALDWEWL (SEQ ID NO:114), Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu ALDWEWLQTE (SEQ ID NO:115), Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu LDWEWLQTE (SEQ ID NO:116), Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu-Trp-Leu-Gln-Thr-TaldwewlqT (SEQ ID NO:118), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr TALDWEWLQT (SEQ ID NO:119), Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr ALDWEWLQT (SEQ ID NO:119), Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr ALDWEWLQT (SEQ ID NO:120), Leu-Asp-Trp-Glu-Trp-Leu-Gln-Tr

- 7. (Previously Presented) The anti-inflammatory compound of claim 3, wherein  $X_a$  consists of 6-12 amino acid residues.
- 8. (Previously Presented) The anti-inflammatory compound of claim 3, wherein  $X_a$  consists of 6-10 amino acid residues.
- 9. (Previously Presented) The anti-inflammatory compound of claim 3, wherein  $X_a$  comprises at least five basic amino acid residues.
- 10. (Previously Presented) The anti-inflammatory compound of claim 7, wherein  $X_a$  comprises at least five amino acid residues independently selected from L-Arginine, D-Arginine, L-Lysine and D-Lysine.

12. (Currently Amended) An anti-inflammatory compound comprising an amino acid sequence selected from the group consisting of Arg-Arg-Met-Lys-Trp-Lys-Lys-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-RRMKWKKTALDWSWLQTE (SEQ ID NO:131), D-Arg-D-Arg-D-Met-D-Lys-D-Trp-D-Lys-D-Lys-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu <del>rrmkwkkTALDWSWLQTE</del> (SEQ ID NO:132), Tyr-Gly-Arg-Lys-Arg-Gln-Arg-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-YGRKKRRQRRRTALDWSWLQTE (SEQ ID NO:133), D-Tyr-D-Gly-D-Arg-D-Lys-D-Lys-D-Arg-D-Gln-D-Arg-D Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-ygrkkrrqrrrTALDWSWLQTE (SEQ ID NO:134), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-RRRRRRRTALDWSWLQTE (SEQ ID NO:136), Tyr-Ala-Arg-Lys-Ala-Arg-Arg-Gln-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu YARKARRQARRTALDWSWLQTE (SEQ ID NO:137), D-Tyr-D-Ala-D-Arg-D-Lys-D-Ala-D-Arg-D-Arg-D-Ala-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-GluyarkarrqarrTALDWSWLQTE (SEQ ID NO:138), Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu YARAARRAARRTALDWSWLQTE (SEQ ID NO:139), D-Tyr-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-GluyaraarraarrTALDWSWLQTE (SEQ ID NO:140), Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu YGRKKRRQRRRLDWSWL (SEQ ID NO:141), D-Tyr-D-Gly-D-Arg-D-Lys-D-Lys-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu ygrkkrrqrrrLDWSWL (SEQ ID NO:142), Arg-Arg-Met-Lys-Trp-Lys-Lys-Leu-Asp-Trp-Ser<u>Trp-Leu RRMKWKKLDWSWL</u> (SEQ ID NO:143), <u>D-Arg-D-Arg-D-Met-D-Lys-D-Trp-D-Lys-D-Lys-Leu-Asp-Trp-Ser-Trp-Leu rrmkwkkLDWSWL</u> (SEQ ID NO:144), <u>D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu <u>YARAARRAARRLDWSWL</u> (SEQ ID NO:146), <u>D-Tyr-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu <u>RRRRRRRLDWSWL</u> (SEQ ID NO:148).</u></u>

13. (Currently Amended) An anti-inflammatory compound comprising an amino acid sequence selected from the group consisting of

H-Arg-Arg-Met-Lys-Trp-Lys-Lys-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> H-RRMKWKKTALDWSWLQTE-NH<sub>2</sub> (SEQ ID NO: 161);

<u>H-Tyr-Gly-Arg-Lys-Arg-Gln-Arg-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub></u> <u>H-YGRKKRRQRRRTALDWSWLQTE-NH<sub>2</sub></u> (SEQ ID NO: 162);

<u>H-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> H-rrrrrrTALDWSWLQTE-NH<sub>2</sub> (SEQ ID NO: 163);</u>

H-Tyr-Ala-Arg-Lys-Ala-Arg-Gln-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> H-YARKARRQARRTALDWSWLQTE-NH<sub>2</sub> (SEQ ID NO: 164);

<u>H-Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-</u>

<u>Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub></u> H-YARAARRAARRAARRTALDWSWLQTE-NH<sub>2</sub> (SEQ ID NO: 165);

<u>H-Arg-Arg-Met-Lys-Trp-Lys-Lys-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub></u> H
<u>RRMKWKKLDWSWL-NH<sub>2</sub></u> (SEQ ID NO: 166);

H-D-Arg-D-Arg-D-Met-D-Lys-D-Lys-D-Lys-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> H-rrmkwkkLDWSWL NH<sub>2</sub>(SEQ ID NO: 167);

<u>H-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> H-rrmrrLDWSWL-NH<sub>2</sub> (SEQ ID NO: 168);</u>

H-Tyr-Ala-Arg-Ala-Ala-Arg-Ala-Ala-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> H-YARAARRAARRLDWSWL-NH<sub>2</sub> (SEQ ID NO: 169);

H-D-Tyr-D-Ala-D-Arg-D-Ala-D-Arg-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> H-yaraarraarrLDWSWL-NH<sub>2</sub> (SEQ ID NO: 170); and
H-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> H-YGRKKRRQRRRLDWSWL-NH<sub>2</sub> (SEQ ID NO: 171)